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IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, A. D. 1936.

No. 765

THE MANTLE LAMP COMPANY OF AMERICA,
Petitioner,

vs.

ALUMINUM PRODUCTS COMPANY,
Respondent.

ON CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

Petitioner's Brief.

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Petitioner's Brief.

This case comes before this Court by reason of the allowance of a petition for the Writ of Certiorari directed to the Circuit Court of Appeals for the Seventh Circuit. (March 29, 1937.)

Opinions of the Courts Below.

Findings of Fact and Conclusions of Law, without further opinion, were filed by the District Court herein and are unreported but appear on pages 321 to 325 of the Record.

The opinion of the Circuit Court of Appeals for the Seventh Circuit is reported in 86 Fed. (2) 509 (Rec. 493). (For convenience it appears in Appendix "A", Page 49.)

Allied Opinions.

Of collateral interest to the decisions in this proceeding are the following opinions, all relating to the patent in suit:

Macomb Manufacturing Co. v. *Mantle Lamp Company of America*, 22 Fed. (2) 93 (C.C.A. 7). Opinion rendered May 28, 1927, petition for rehearing denied December 5, 1927, in which the patent was held invalid for lack of invention. (This appears in Appendix "B", Page 51.)

Monarch Company, Inc., et al. v. *Mantle Lamp Company of America*, 22 Fed. (2) 95, (C.C.A. 7). Opinion rendered May 28, 1927, petition for rehearing denied December 5, 1927. Follows the ruling in the *Macomb* case. (This appears in Appendix "C", Page 57.)

Mantle Lamp Company of America v. *George H. Bowman Company*, 53 Fed. (2) 441 (C.C.A. 6). Opinion rendered November 3, 1931, in which patent was held valid and infringed. (Appendix "D", Page 59.)

Knapp-Monarch Co. substituted plaintiff v. *Mantle Lamp Company of America*, 81 Fed. (2) 428 (C.C.A. 7). Opinion rendered January 18, 1936, in which the injunction against the prosecution of a co-pending case in the District Court of the United States, Western District of Missouri, was dissolved.

Triplett v. *Lowell and Mantle Lamp Company of America* v. *Aluminum Products Company*, 297 U. S. 638. These relate to questions certified to this Court by

the Circuit Court of Appeals for the Seventh Circuit herein, relating to the necessity for Petitioner to have filed a disclaimer.

Jurisdiction Grounds.

The jurisdiction of this Court is invoked under Section 240 (a) of the Judicial Code (28 U.S.C. 347, as amended).

The date of the decree to be reviewed is November 28, 1936 (Tr. 493). The petition for writ of certiorari was filed February 27, 1937.

Cases believed to sustain the jurisdiction are *Holland Furniture Co.* v. *Perkins Glue Co.*, 277 U. S. 245; *Layne and Bowler Corp.* v. *Western Well Works, Inc.*, 261 U. S. 387, 393; *Simmons* v. *Grier Bros.*, 258 U. S. 82; *Abercrombie & Fitch Co.* v. *Baldwin*, 245 U. S. 198.

This cause involves the validity of a patent with respect to which there is real and direct conflict between the Circuit Court of Appeals for the Sixth and Seventh Circuits.

Also involved is the interpretation and application of U. S. Statutes relating to the filing in the United States Patent Office of disclaimers as provided by Sec. 4917 Rev. Stat. (35 U.S.C.A. 65) and Sec. 4922 Rev. Stat. (35 U.S.C.A. 71).

STATEMENT OF THE FACTS.

Petitioner's bill of complaint filed November 21, 1932, in the District Court for the Northern District of Illinois, Eastern Division, charges infringement of patent No. 1,435,199 granted petitioner as assignee of Lewis Van Deventer Blair covering a heat-insulated receptacle of the non-vacuum type (Rec. 342). The claims in suit, namely, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 21, 22, 23 and 24, were held invalid by the District Court for lack of invention, prior invention, anticipation, as being an aggregation, and as arising from mechanical skill only (Rec. 325); they were limited to the particular structure disclosed, and as such held not to be infringed; and all claims of the patent, including those not in suit (namely, 2, 15, 16, 19 and 20), were held invalid for unreasonable delay and neglect in filing disclaimers (Rec. 325). The judgment of the District Court was affirmed in its entirety by the Circuit Court of Appeals for Seventh Circuit (Rec. 493, 494).

Thermally-efficient heat-insulated containers for liquid and food products, prior to the invention in suit, were vacuum insulated. They were frail and limited in size by mechanical considerations.

Among prior products were containers having an inner and an outer metal wall (inefficient because the metal readily conducted heat and the period of heat retention was too short, and unsanitary because metal was corrosive); containers having an inner glass wall and an outer jacket of metal (unsatisfactory because the paths of heat

conductivity were too ample, and equalization of external and internal temperatures was too quickly produced, and because no means was known for uniting the glass to the metal of the jacket); containers wherein the inner vessel was supported from the bottom as well as from the top (inefficient because the supports afforded too many avenues for the escape of heat, and the period of heat retention was unduly shortened).

The device invented by Blair combines several features of construction all of which cooperate to produce the required heat retention through long periods of time; to make a large, strong, and sanitary heat-insulated receptacle of the non-vacuum type in which the glass (or vitreous earthenware) of the inner part is so joined to the metal jacket that disunion of these parts will not be caused by shocks occurring when the inner container bears its load of some fifteen pounds; to produce an article in which there is only a single path of heat conductivity not through metal, but through the poor heat-conducting path of the glass of the inner part; to produce a jacketed heat container in which circulation of air within the jacket is prevented to thereby avoid convective cooling of the inner vessel and the food products therein; to prevent unsanitary accumulations of foreign matter within, as well as the entrance of moisture into the jacket; and to so facilitate the manufacture of the device that the cost thereof will be minimized and the public will be correspondingly benefited.

The Blair patent.

The Blair patent appears in the record at page 342.

Blair dispenses with the vacuum space of smaller devices, and secures a high degree of heat insulation in

quite a different way. His receptacle includes a *protective jacket and a single-wall container*, said container being composed of a substance which is at once sanitary and a poor conductor of heat, and very different from double wall vacuum and metal containers. This container is fixedly and firmly connected at its upper end with the top of the jacket by some means which will effectuate such a union, and at all other points is not in contact with the jacket (Rec. 342). Heat, therefore, in order to escape from the food products within the cavity of the container, must be conducted upward through the highly resistant path afforded by the wall of the container, this being the only substantial avenue of escape through a continuous and solid substance. The result attained by this arrangement of the container within the jacket, is maintenance of the desired high temperature of food products for many hours, and this without the use of the vacuum insulation heretofore universally employed in heat-insulated receptacles which were available to the public before Blair made his invention, namely, vacuum-insulated bottles commonly known as "Thermos Bottles."

The space between the bodies of the jacket and the container contains air which is a very poor conductor of heat, a vacuum being the only heat insulator which is superior to it. But air, even though it is a poor conductor of heat, may carry heat from the container to the jacket in another way than by conduction, namely, by flowing from the container to the jacket or from the jacket to the container through a circuit within the space between those elements. This carrying of heat by the circulation of air is called "convection," and this phenomenon is avoided by comminuted material disposed in the space between the bodies of jacket and container, and operating to hold the air in a static condition, while, at the same

time, not affecting the continuity of said air which, as will be noted, lies in the interstices of said comminuted material all of which are in communication throughout the mass. This comminuted material does not support the container, which, as stated, is firmly and fixedly held at its top by the upper part of the jacket, although it incidentally restrains pendulous movements of said container tending to break the frangible neck of the container or rupture the sustaining means.

Thus the Blair invention embodies a container having a self-insulating wall which affords only a single path of heat conductivity upward to the point of union with the jacket, and the body of the container is heat-insulated by static air which entirely surrounds it.

The comminuted material must be kept dry, since moisture will make it a good conductor of heat. Moisture is kept out of the space between the jacket and the container by the sealing bond which unites the container and the protective jacket. An inturned flange extending from the neck of the jacket protects the frangible neck of the container and positions said container in the jacket when the parts are being assembled. It will thus be seen that all of the elements above enumerated are tied together in true combination to produce a single and useful result, and that if the bond, the jacket or the container, or the air space or the packing were omitted, or some sealing device were not used to keep moisture away from the packing, the device would not operate to perform its function.

The Respondent's Device.

The accused device (Plaintiff's Exhibit 6, physical) was manufactured by the respondent (Rec. 83). At the time it was purchased, it was not cut up, but was thereafter

opened and examined, and there was a cup-cap screw-threaded to the neck of the jacket and on top of the stopper (Rec. 28).

The accused device is a heat-insulated container of the non-vacuum type (Rec. 29) having an outer metallic jacket in multiple sections joined together by a circumferential seam, an inner vitreous container joined to the neck of the outer jacket, comminuted insulating material positioned between the outer jacket and the inner container, and having a cork for a stopper (Rec. 29). A material composed largely of sulphur is found between the necks of the jacket and container forming a bond uniting the two mechanically, and also preventing moisture entering into the space between the container and the jacket. The upper extremity of the outer jacket has a contracted threaded section and an in-turned annular lip extending over the inner container which facilitates assembling and affords protection to the frangible container (Rec. 29, 30). The sulphur element at the necks becomes a bond by interlocking with the annular grooves on the outer surface of the neck of the container and the screw threads on the neck of the jacket (Rec. 30). This element is also an adherent bond (Rec. 189). The container is supported in the jacket by the bond (Rec. 30). The stopper has a flange, a rubber gasket and a depending section spaced apart from the inner wall of the container which goes into the mouth of the inner jacket and is loose. The sulphur bond is a non-conductor. The inner container is made of earthenware, which is frangible, the inner surface being glazed or vitrified. The usual methods of joining metal to metal are not available for joining a vitreous substance to a metallic one (Rec. 30-31).

The material between the walls of the jacket and container in Plaintiff's Exhibit 6 is saw-dust. Subsequent to February 1932 the use of saw-dust for that insulating material was discontinued and thereafter (Rec. 83), a substance commercially called Zonolite was adopted by the respondent and used as the material disposed between the walls of the container and the jacket (Rec. 83). The respondent contends that the only purpose of the element composed of sulphur which is disposed between the necks of the container and the jacket is to there form a rigid connection (Rec. 84, 85).

The petitioner contends that the sulphur element used to unite the necks of the jacket and the container is a mechanical interlocking bond, an adherent bond and a seal to prevent moisture entering the space between the jacket and the container; that Zonolite is a mineral substance composed largely of mica, is formed in layers, is highly absorptive of moisture, and that if moisture entered the space between the container and the jacket, a large portion of the insulating qualities of the composite device would be destroyed or impaired (Rec. 182).

The functions of the several parts of Plaintiff's Exhibit 6 are the same functions as the ones described in the Blair patent in suit (Rec. 17-25).

Prior Litigation Involving the Blair Patent.

The Blair Patent No. 1,435,199 in suit was held valid by District Judges Fitzhenry and Cliffe, who respectively and independently heard and decided the suits entitled, *The Mantle Lamp Company of America* v. *Macomb Manufacturing Company* and *Monarch Company, Inc., and Therm-A-Jug Company, Inc.* v. *The Mantle Lamp Company of America.*

The Circuit Court of Appeals for the Seventh Circuit reversed the lower courts (22 F. (2d) 93, 95), and held said Blair Patent invalid for lack of invention over the prior art, and said:

> "With Heath, Clisbee, and Fox in the field—Heath and Clisbee both showing (except the bond between the container and the jacket) the construction adopted by Blair, Heath's object being shock resistance and Clisbee's heat insulation, both using the same means and construction—did it involve invention to take Fox's bond and add it to Heath or Clisbee? We think this involved mechanical skill, and not inventive genius."

The decisions of the Circuit Court of Appeals for the Seventh Circuit became final upon the denial of the petitions for rehearing on December 5, 1927. At that time, the case of *The Mantle Lamp Company of America* v. *The Cutino Company* upon the same Blair patent was pending in the District Court of the United States for the Western District of Missouri. A bill to enjoin the prosecution of that suit was filed by the Monarch Company, *et al.*, in the United States District Court for the Northern District of Illinois, Eastern Division. A motion for preliminary injunction therein was denied. Appeal was taken to the U. S. Circuit Court of Appeals for the Seventh Circuit. That Court reversed the District Court. On October 2, 1928, in pursuance of the Circuit Court of Appeals' mandate, the District Court issued its preliminary injunction against the prosecution of said Cutino suit in the District Court for the Western District of Missouri. Also the prosecution of any suit against any of the customers of the Monarch Company, *et al.* was enjoined. The cause later came on for final hearing. The injunction was made per-

manent, but in 1936 was reversed by the Circuit Court of Appeals for the Seventh Circuit. The opinion appears in 81 Fed. (2) 428.

On September 12, 1928, petitioner had filed a bill in the District Court of the United States for the Northern District of Ohio, Eastern Division, against another infringer, not a customer nor jobber of the Monarch Company, *et al.* The District Court dismissed the bill of complaint. Petitioner then prosecuted an appeal to a successful conclusion in the Circuit Court of Appeals for the Sixth Circuit. (*The Mantle Lamp Company of America* v. *George H. Bowman Company,* 53 Fed. (2) 441 decided November 3, 1931).

Within the time allowed by law thereafter, petitioner though successful as just stated filed its petition for the writ of certiorari in this Court for review of the said decision of the Circuit Court of Appeals for the Sixth Circuit. (It was then too late to petition the Supreme Court for the writ of certiorari directed to the Seventh Circuit in the *Monarch* and the *Macomb* cases.) The petition for the writ of certiorari was denied on March 14, 1932, 285 U. S. 545.

The bill of complaint in the instant case was filed November 21, 1932.

The District Court herein, in its Findings of Fact and Conclusions of Law, passed upon the validity and scope of the claims in suit (Rec. 321 to 325). It held the patent invalid for unreasonable delay and neglect in filing disclaimers to claims previously found to be invalid by the Seventh Circuit Court of Appeals in the *Monarch* and *Macomb* cases (22 Fed. (2) 93, and 22 Fed. (2) 95), but the District Court made no finding as to whether or not previously unadjudicated portions of the patent constituted

"a material and substantial part of the thing patented" and "were definitely distinguishable from the parts claimed without right" (Rec. 325).

The Circuit Court of Appeals for the Seventh Circuit, after briefs and oral arguments herein, certified to this Court three questions relating to the propriety and necessity for filing a disclaimer (No. 590, October Term 1935). These questions this Court declined to answer categorically because of a lack of factual basis in the certificate. This Court's guiding observations, however, when dismissing the certificate, are reported in *Triplett* v. *Lowell* and *The Mantle Lamp Company of America* v. *Aluminum Products Co.* (297 U. S. 638).

After the dismissal of the certificate by this Court, the Circuit Court of Appeals for the Seventh Circuit, after reargument of the entire case, affirmed the District Court. Its opinion comprises a reference to its previous opinions in the *Monarch* and *Macomb* cases (22 Fed. (2) 93 and 95). Thus it adopted the District Court's finding of invalidity of the entire patent for failure to file a disclaimer, without comment and without following the guiding suggestions made by this Court relating to the certified questions.

Specification of Errors.

The errors relied upon are that the Circuit Court of Appeals for the Seventh Circuit erred:

1. In holding the claims in suit of the patent involved invalid.

2. In adopting its rulings in the *Monarch* and *Macomb* cases wherein the patent in suit was held invalid by finding separate and non-combinable elements in separate patents in the prior art.

3. In applying its rulings in the *Monarch* and *Macomb* cases to a record containing the additional testimony included in the *Bowman* case in the Sixth Circuit.

4. In affirming the decree of the District Court which was in part based upon a finding of non-infringement.

5. In failing to reverse the decree of the District Court holding all of the claims of the patent invalid for failure to file disclaimer.

SUMMARY OF ARGUMENT.

Point I.

The Blair jug is novel. Its novelty has never seriously been assailed.

(a) Blair departed from the teachings of the vacuum bottle art, and made a sturdy, sanitary and thermally-efficient jug.

(b) The Sixth Circuit affirmatively recognized novelty.

(c) The same art was considered by both Circuits.

Point II.

Invention in the Blair device is clearly shown.

(a) Although by adoption of its former reasoning, Seventh Circuit denies invention.

(b) The Sixth Circuit differs.

(c) Patents relied upon by Seventh Circuit, namely, Heath, Clisbee, and Fox, do not contain the elements or the functions of Blair patent.

Point III.

New evidence alone justified the Sixth Circuit Court of Appeals finding of validity.

(a) Substantially the same new evidence in the case at bar received no consideration from the Court of Appeals for the Seventh Circuit.

(b) The new evidence consisted of testimony of Terry, president of the Keeps-It Bottle Company of Cincinnati, Ohio, and of Brainard formerly president of the Macomb Manufacturing Company, which was the appellant in the prior litigation before the Court of Appeals, Seventh Circuit.

(c) These skilled manufacturers failed to recognize the structural reasons for the advantages of the Blair device.

Point IV.

The Court of Appeals, Seventh Circuit, erroneously labeled Blair's contribution as being the result of mechanical skill only, when the evidence shows those highly skilled had failed.

(a) The Court of Appeals, Sixth Circuit, is clearly correct in its reasoning.

Point V.

The cited prior art is not pertinent.

Point VI.

In case of doubt, commercial success should weigh heavily in favor of invention.

Point VII.

Infringement is clearly shown.

Point VIII.

The claims in suit are all applicable to the accused device.

Point IX.

Although the District Court based its decision partly on prior invention, none was shown.

Point X.

The Blair patent is not invalid by reason of the failure to file a disclaimer, because:

(a) After the original finding of invalidity of the claims in suit, no substantial and separable part of the thing patented remained which the patentee could save by disclaimer;

(b) Petitioner has unceasingly continued its efforts to establish the validity of its patent, and

(c) Petitioner has not acquiesced in any finding of partial invalidity by endeavoring to enforce a decree holding a portion valid and abandoning, without appeal or disclaimer, portions found invalid.

ARGUMENT.

Point I.

The Blair jug is novel. Its novelty has never seriously been assailed.

Prior to the Blair invention there was no thermally-efficient heat-insulated receptacle available to meet a demand for a large and sturdy heat-insulated receptacle. The vacuum or thermos bottle had been on the market since about the year 1906 (Rec. 60). It was thermally efficient but was very fragile and could be made only in small sizes. Both in manufacture and in use it was of necessity handled with great care.

The infirmities and limitations of the thermos bottle created a demand for a larger and more satisfactory heat-insulated receptacle which caused those skilled in the heat insulating art to seek a solution of the problem. Some of these unsuccessfully endeavored to increase the size as well as the strength of the thermos bottle (Rec. 62). The remainder tried otherwise to produce large and thermally efficient receptacles of the non-vacuum type. They failed also. The heat insulated container revealed in the patent to Rood and Johnson, No. 1362740 (Rec. 426) granted in the year 1920 is an example of the devices produced as a substitute for the vacuum insulated thermos bottle.

Blair, in departing from previous vacuum type heat-insulated receptacles, was the first to put forth a sturdy, sanitary, thermally-efficient, and large sized heat-insulated receptacle of the non-vacuum type.

Its novelty was recognized by the Circuit Court of Appeals for the Sixth Circuit when it said in its opinion in the *Bowman* case, "The record leaves no doubt that Blair's combination was new, and its utility is demonstrated by the large sales and the adoption by infringers." No finding of lack of novelty was made by the Seventh Circuit Court of Appeals in the *Macomb* and *Monarch* cases, and by reference in its opinion in this case, it adopts its former reasoning.

The same prior art has been considered by all courts, and they differ merely on the question of invention.

Point II.

Invention in the Blair device is clearly shown.

The Circuit Court of Appeals for the Seventh Circuit (Rec. 493) herein should be read in the light of its opinions in the prior *Macomb* and *Monarch* cases (Appendices B and C) since it refused to depart therefrom and does not base its last decision upon new reasoning. It adheres to its finding that it did not "involve invention for Blair to take the bond from Fox and the other elements from Heath or Clisbee, or both of them, and assemble them in one heat insulated, non-vacuum receptacle."

The Decision of the Circuit Court of Appeals for the Sixth Circuit.

The Circuit Court of Appeals for the Sixth Circuit, in the case of *The Mantle Lamp Company of America* v. *George H. Bowman Company*, 53 F. (2nd) 441 (Rec. 220), which had before it the records made in the two cases tried in the Seventh Circuit, said:

"The Seventh Circuit Court of Appeals relied upon three old patents as the most pertinent out of many cited by defendant in that case, and expressed the view that in selecting elements from these three and combining them, as Blair did, there was no invention. Even if this were a case where the lack of invention could be spelled out in this way, the patents do not seem to us sufficient for that result. • • •

"The leading decisions on the subject of invention are too familiar for citation. Their application depends on the facts of each case. We are constrained to the other conclusion from that reached by the Seventh Circuit Court of Appeals. It may well be noted that the testimony of two competitors, showing their unsuccessful efforts to get Blair's result by other means, was not in these McComb and Monarch records, and this proof is so important that it alone goes far toward justifying a different result here.

Three patents, namely, Clisbee (Rec. 360), Heath (Rec. 356) and Fox (Rec. 366), formed the basis for the decision of the Circuit Court of Appeals for the Seventh Circuit.

Patents relied upon by the Seventh Circuit Court of Appeals, namely Heath (1879), Clisbee (1887) and Fox (1890), do not contain the elements nor the functions of Blair patent (1922).

1. The patents to Fox and Heath relate to a non-analogous art, that is to say, an art which comprehends devices for preventing frangible containers from being broken, and does not afford information which would assist the makers of heat-insulated receptacles in devising a heat-insulated receptacle of the non-vacuum type. A shock-absorbing substance surrounding a frangible container like

that of Fox or Heath, would, of course, delay the cooling of a hot substance, or the heating of a cool substance held in said container, but no one without experimentation would be able to determine that heat insulation of those substances would be adequate. The box B and its enclosed packing C, shown in the Fox patent (Rec. 366), and the casing A and its enclosed filling revealed in the Heath patent (Rec. 356), respectively constitute an armor for the carboy A and the bottle D of these patentees. An armor worn by a soldier might keep him warm, but it would not teach him or any one else how to make a heat-insulated receptacle of the non-vacuum type. Obviously, protecting a carboy or a bottle with an armor does not justify classifying it in the heat-insulating art. Some things are common to the arts as a whole, but non-analogous arts, although they may include things in common, are differentiated by those things which are clearly distinguishable from each other both as to structure and function. An armor which adequately protects a carboy, or a bottle, or a food container from shocks, may be deficient in its heat-insulating properties, and this is true of the devices of Fox and Heath neither of whom was attempting to advance the heat-insulating art, or contributed any information concerning it which was before unknown. This Court has repeatedly held the devices in non-analogous arts are not to be regarded as anticipations. (*Hobbs* v. *Beach*, 180 U. S. 383.)

Fox does not disclose a bond substance, the plaster-of-Paris B which he employs "to hold the carboy firmly in place within the box" and "to exclude water or moisture from the packing C," being a material which will not adhere either to metal or to glass. It will interlock with an irregular surface, but as stated by the witnesses Davis and

Low (Rec. 205, 173, 174), if "applied to a smooth surface it will cleave readily therefrom."

The witness Terry, speaking of the device shown in the patent to Altenberg, No. 900,075 (Rec. 374) and cited in the defendant's answer (Deft's. Ex. 5g), says (Rec. 61) that the vacuum bottle shown therein and manufactured by the Icy-Hot Bottle Company, with which he was connected, had plaster-of-Paris disposed between the filler and the jacket at the neck, and that (Rec. 61) their experience was very unfortunate with it. The plaster-of-Paris would not adhere readily to the glass or the metal and it would crumble, causing the filler to drop down onto that felt pad where it rested (Rec. 61). If plaster-of-Paris thus failed to support the light filler of a thermos bottle like that shown in the Altenberg patent, weighing a few ounces, it obviously did not operate as a means for sustaining the heavy carboy of Fox and could not be a sustaining means for the container of a large heat-insulated receptacle of the non-vacuum type such as is involved in this suit, whose weight with its load (Rec. 75) is eighteen pounds.

The expert witness Low states (Rec. 173, 174) that the plaster-of-Paris as used in the Fox patent is not constructed so that it can in any manner serve as a bond, its function being just the contrary. It braces the neck of the bottle away from the edges of the aperture in the top of the case and has no interlocking means with the jacket or with the neck of the carboy, it simply being in contact with those parts. Plaster-of-Paris requires an interlock to keep it in place ordinarily, or something very rough to cling to. This witness further testifies that there is no suspension of the carboy within the box; that the carboy rests on the bottom of the case; that on account of its great weight it must be so supported; that it could not be supported by

any other suspension shown in the patent; that the device was intended to prevent the breaking of the carboy and conflagrations arising from the spilling of strong acid contained in the carboy; that it contains no bond. Plaster-of-Paris has the real function of centering the carboy in an upright position and resting on the base of the case and to keep it from tipping to one side or the other; that if the bottom of the box were removed and the box lifted, the box and the plaster-of-Paris would come up together, or possibly the box would separate from the plaster and leave that on the neck of the carboy; that plaster-of-Paris soaks up water very readily; that there is no disclosure in the Fox patent indicating that the material C is interposed for the purpose of heat insulation, all parts in the patent being at atmospheric temperature. There is a reference in the patent to freezing, and mineral wool is used as a packing, so that in case of freezing, damage will not be effected; that mineral wool is used primarily to prevent the arising of a conflagration from the spilling of the acid, and that the inventor had in view the incombustibility of plaster-of-Paris in using that substance for a filler or brace at the top of the case, plaster-of-Paris being incombustible.

2. The Heath patent (Rec. 356) discloses no element which is additional to and intervenes the case A and the bottle D and provides no space in which a bond could be disposed. This patent is simply a disclosure of an armored glass bottle "the object sought being the prevention of breakages during transportation" (p. 1 Specification, Par. 2 (Rec. 357)). Concerning this Heath device, the expert witness Low says (Rec. 175), it is an encased bottle for transporting fluids, the only object mentioned being to prevent the breakage of the receptacle. This is another

device in which everything is supposed to be at atmospheric temperature. There is no disclosure indicating that the inventor intended this device to be a heat-insulated receptacle. There is, however, a double case and a packing is illustrated which is intended to prevent the breaking of the bottle. There is no bond between the jacket and the container at any point; there is no seal between the jacket and the container nor any place in the Heath patent where a bond or seal could be interposed between the necks of the jacket and the container without removing some of the material that is now there. It is difficult to see how a bond could be applied in this structure so as to operate efficiently between the neck of the bottle and the top part of the jacket (Rec. 176).

The specification says that the bottle *may* have a flange. The specification could not be so written if there were any contemplation of the container being suspended on the jacket. The bottle rests on the packing in the bottom of the jacket, which packing tends to force the bottle upward. There is no necessity for its being hung from or resting on anything except the packing of the bottle. The specification, near the bottom of the second column on the first page says that the top of the neck B is braced inwardly so as to close firmly around the neck of the bottle "which may be flanged as shown" (Rec. 357). If the screw-threaded cap were removed from this device and the device inverted, turned upside down, the bottle would remain immovable, except possibly a slight sliding of the parts, there would be left a very small space in which the glass container might settle toward the normal top of the jacket (Rec. 177).

There is in the specification of the Heath patent no description indicating that the drawing illustrates a heat-

insulated receptacle. Nor is there in that instrument any description indicating what elements, if any, would operate to oppose equalization of external and internal temperatures, the only ascribed function of the packing being "prevention of breakage during transportation" (paragraph 2, page 1, specification and elsewhere) (Rec. 357).

Thus, it is clear that Heath's armored bottle, like the armored carboy of Fox, is foreign to the art of heat-insulated receptacles and affords no information which would aid one who would supply the waiting public with a satisfactory substitute for the frail vacuum-insulated thermos bottle.

The failure of the Heath specification to describe any heat-insulating means, clearly eliminates it from serious consideration.

3. The witness Low (Rec. 174) says, concerning the Clisbee device, the description in the patent is that the neck of the outer can and the neck of the inner can "meet," indicating that there is no insulation between the wall of the outer can and the wall of the inner can at that point, and indicating nothing further than that they touch each other. These two elements touch each other and leave no room between them for a bond, and on their outer ends or edges, they are contacted by the horizontal flange of a ring, so that there is no place for the application of a bond. The inner can is constructed of sheet metal, which is considered a good conductor of heat. *The Clisbee can is an inefficient receptacle for the conservation of heat.* The statement contained in the specification that the object of the invention is to retain heat in the contents for twenty-four hours is excessive (Rec. 175).

A faucet is provided for drawing the coffee out of the can. This faucet extends from the inner container

through the insulating material and through the outer jacket, and is necessarily in intimate contact or connection with the container and with the jacket. The faucet, unless it should be of wood, would be a very good conductor of heat and would conduct heat from the contents to the outer jacket, where it would be radiated (Rec. 175).

Familiar and known ways of joining metal to metal are brazing, soldering and crimping with sheet metal, sometimes called double-seaming. There is no disclosure in the Clisbee patent of means which could be employed to unite a metal jacket to a frangible vitreous container (Rec. 175).

Sessions, the expert, was not able to cite any one patent as a better reference than any other against the Blair device. On cross examination, *he sought to find in six separate patents elements which when combined would, in his judgment, constitute the Blair device* (Rec. 147). These were the patents to Heath (Rec. 356), Clisbee (Rec. 360), Fox (Rec. 366), Lyman (Rec. 378), Altenberg (Rec. 374), and Burger & Aschenbrenner (Rec. 382). This evidence of Sessions alone argues convincingly that invention resides in Blair's device. Even had the elements referred to in the various patents by Sessions contained the functions which he ascribes to them, in view of the fact that he, with Blair's teaching before him, sought to find it in six combined patents—which combined are his best references—how can it be argued that one less skilled than he, the one of ordinary skill in the art, would have made an examination here and there and selected the elements piece by piece out of these six patents and arranged them to produce the Blair construction? Certainly no one ever did so.

Furthermore, Heath and Fox are not heat-insulated receptacles at all and never were intended as such; neither do they have a seal or a bond. Clisbee did not recognize the importance of having one path of heat conductivity, nor the importance of having a container made of a vitreous substance, which would be a poor conductor of heat, and teaches nothing which would enable those skilled in the art to so unite a metal jacket and a vitreous container as to produce an efficient receptacle. The Altenberg (Rec. 374), Lyman (Rec. 378), and Burger & Aschenbrenner (Rec. 382) devices are vacuum bottles, the frailities and inefficiencies of which Blair was endeavoring to and did overcome. While the witness, Sessions, endeavored to characterize the elements between the necks of the protecting metal jackets and the outer walls of the double-walled vacuum containers of each of these several patents as being the equivalent of and functioning in the same manner and located in the same place as the Blair bond or seal (Rec. 115, 116, 105) nevertheless, such is not the fact. They do not seal the entrance to the insulating space at all, as in each of these patents, the insulating space (the vacuum space) is between the two glass walls, and not between a single glass wall and a metal jacket, as in Blair's. In the construction shown in these three patents, three walls are required instead of two, as in Blair's, and the vacuum containers being supported elsewhere are centered only by the elements around the necks, and are not sustained by said elements, as in Blair. The witness Terry, engaged in the manufacture and sale of vacuum bottles, and manufacturing the very device described in the Altenberg patent, testified

that the element between the neck of the jacket and the neck of the outer wall of the double-walled container, did not constitute a bond or a seal, and that his company was obliged to discontinue the manufacture of the construction shown and described in the Altenberg patent (Rec. 61).

On the instant record it is plain that no one of those persons who was desirous of producing a large and sturdy heat-insulated receptacle, solved the problem with which he was confronted by combining in a single device the supposedly-old elements enumerated by Seventh Circuit Court of Appeals in its adverse decisions, and that no one thought of combining them until it became necessary to defend the suits instituted by the Appellant herein. To state the proposition in another way, the revelations of the patents to Fox, Heath and Clisbee were not suggestive of the Blair invention prior to the bringing of these suits, whereas with after-acquired wisdom they were alleged as anticipations of that invention as soon as said suits were filed. Said patents are respectively dated October 14, 1890, January 7, 1879 and March 1, 1887, and it would seem that there was ample time to combine the elements disclosed therein, if they could be combined by the exercise of mere mechanical skill, long before Blair produced his patented device.

There was no reason for including in the Clisbee construction an element which would minimize lateral vibrations of its metallic container, since obviously, a metallic container would not crack at its neck.

The Fox device is not hung by its neck, as is that of Blair, hence it requires no means for restraining pendulous movements of its *non-pendent* container. The Fox container is composed of glass which might be fractured by a force acting from without, as contradistinguished

from a force applied, as in the Blair device, to a support through the leverage of the container itself, the packing in Fox being merely a shock absorbent.

Point III.

New evidence alone justified the Sixth Circuit Court of Appeals finding of validity.

The record in the case at bar contains the testimony of Brainard and Terry, to the same effect as that commented upon by the Circuit Court of Appeals for the Sixth Circuit. The Circuit Court of Appeals for the Seventh Circuit fails however to give consideration to this new different and highly persuasive evidence on the question of invention.

Testimony of Terry, president of the Keeps-It-Bottle Company of Cincinnati, Ohio, and of Brainard, formerly president of the Macomb Manufacturing Company, which was the appellant, in the prior litigation before the Court of Appeals, Seventh Circuit.

The history of the art of heat-insulated receptacles is clearly portrayed by the testimony of the witness, Terry (Rec. 60-64), who for twenty-one years has been engaged in the manufacture and sale of vacuum bottles, formerly associated with the Icy-Hot Bottle Co., American Thermos Bottle Co. and Keeps-It Bottle Co. which made thermos bottles (Rec. 60); and also by the testimony of the witness, Brainard, manufacturer of sheet metal steel stamping, but formerly, and in 1920, president of the Macomb Manufacturing Company (Rec. 46, 47, 48), appellant in one of the above mentioned cases decided by the Court of Appeals, Seventh Circuit.

Terry's testimony is in part as follows (Rec. 60-64):

The vacuum bottles manufactured by the Icy-Hot Bottle Company in the year 1908 had a glass bottle blown into another glass bottle and welded at the neck. A bottom was formed by heating the outer glass bottle and forming a bottom. A hole was left in the outer bottle so that it could be attached to a vacuum pump and the air pumped out of the space between the two glass walls. That was known as the filler. Then, the glass filler was inserted in a metal outer container. At that time, we anchored the glass filler at the neck with plaster-of-Paris and at the bottom there was a fiber pad to rest the filler on. The welding of the glass at the neck of the filler was accomplished by putting it into the fire and forming the neck, and when the glass was soft, naturally it would weld together. The glass from which vacuum bottle fillers are made is very thin, much thinner than any common tableware, or even high-grade tableware (Rec. 60).

The patent to George P. Altenberg No. 900,075 (Rec. 374) was issued to the same George Altenberg with whom the witness was associated in business, and that patent describes the vacuum bottles manufactured by the Icy-Hot Bottle Company in 1908 (Rec. 61).

The weight of the filler in a vacuum bottle is about eight ounces. The Icy-Hot Bottle Company continued to manufacture that type of vacuum bottles until 1911, and then changed the type. The plaster-of-Paris at the neck was eliminated and the outer metal case was made with a removable bottom. The glass filler was inserted through the bottom, and a rubber ring placed at the neck of the glass filler. The glass container was kept in place by a tripod metal spring at the bottom of the base, and when the bottom of the outer metal case was placed in position, the

spring would hold the filler tightly against the rubber gasket at the neck (Rec. 61).

In 1917 or 1918, the Icy-Hot Bottle Company was very anxious to produce a vacuum container of one gallon or more, principally for Army use. It had some glass pistons made of the larger sizes and started to experiment in the making of a large glass vacuum filler. It was found that the glass blowers (factory workers) who would heat the glass and shape it (Rec. 61), in drawing the bottom of the outer glass piston, got the glass so thin that the bottle would collapse in their hands. It was like egg-shells. These experiments were continued and it was found that a commercially satisfactory vacuum container of one gallon capacity could not be made. The concern never submitted the samples to the Government.

The Icy-Hot Bottle Company, prior to the year 1920, sold quart-size vacuum bottles for picnic use and for automobile outings. In 1921, the sale of quart vacuum bottles started to decrease. In 1920, Terry first saw a heat-insulated receptacle of the non-vacuum type. He bought one for the factory. The first one he saw was the Aladdin jug made by the Mantle Lamp Company of Chicago. His company took that jug to its experimental room and tore it apart because they wanted to see what the Mantle Lamp Company had and whether they could go into the making of a similar jug. Thereafter, the Icy-Hot Bottle Company made a heat-insulated receptacle of the non-vacuum type. On tearing apart the Aladdin jug, the material in the space between the two containers was visible. The Icy-Hot Bottle Company decided to make one similar to it. It took the inner container, put a heavy rubber ring around the neck, and then pushed that up and rested the inner container on a metal tripod spring, which spring rested on

the bottom of the outer container. Several kinds of material between the walls of the container and the jacket were used but finally it was decided to use chipped cork, or ground cork. There was nothing else around the neck except the rubber ring. This bottle would keep the contents hot or cold between four and five hours. Terry tested Aladdin Thermalware jars manufactured by the Mantle Lamp Company of America and found that they kept things hot or cold between seven and eight hours (Rec. 62). For his own use he used Aladdin jug in his own automobile (Rec. 63).

Terry testified that the percentage of breakage in vacuum bottles of the pint size, that is, the small size, would probably run about eight or ten per cent; that breakage being only in the process with the glass-blowers, not counting the breakage with the pumps. The breakage in the drawing of the vacuum would run about three per cent. The percentage of loss in the manufacture of quart-size vacuum bottles in the manufacture runs around twelve to fourteen per cent, and about two and one-half or three per cent on the pumps. Terry's company made larger vacuum bottles than one quart and found the breakage to run as high as forty and fifty per cent and more (Rec. 63). The witness attributed the breakage in the manufacture of the larger-sized vacuum bottles to the fact that when the glass is in the fire, with a large container, the worker has the flame working in one spot on that glass, and when it is turned around and heating the other part of the glass is started, the part that has already been heated starts to cool off and cracks, and when the glass is drawn by the glass-blower on a larger container, naturally he pulls more glass and makes the wall of the container that much thinner, almost as thin as an egg-shell (Rec. 64).

"I consider vacuum bottles frail articles" (Rec. 64).

Terry did not testify in the case of *The Mantle Lamp Company* v. *The Macomb Manufacturing Company*, nor in the case of the *Monarch Company and Therma-A-Jug Company* v. *The Mantle Lamp Company of America*. He did testify in the case of *The Mantle Lamp Company of America* v. *George H. Bowman Company* (Rec. 64).

Brainard did not testify in the *Macomb* or *Monarch* cases. His testimony in this record included the following statements, digested in part and left in the first person (Rec. 46-48).

Testimony of Pearl A. Brainard.

I was president of the Macomb Manufacturing Company, which was a party to the suit of *The Mantle Lamp Company of America* v. *The Macomb Manufacturing Company*, when they began the manufacture of heat-insulated receptacles. The first heat-insulated receptacles manufactured by the Macomb Manufacturing Company had an inner jacket made of earthenware, the inside of which was glazed white, and had a groove in the neck and a steel breast was drawn around this groove and soldered along the edges, and the body of the steel jacket was attached to the breast and insulated with cork. It had a stopper and a cap and a bail. The drawing which I made this morning (Pltf's. Ex. 8; Rec. 239) is a drawing of the type of container we first manufactured. The steel breast was merely contracted into the slotted neck (Rec. 46, 47, 48).

I did not testify in the case of *The Mantle Lamp Company of America* v. *The Macomb Manufacturing Company*, nor in the case of the *Therm-A-Jug Company and the Monarch Company* v. *The Mantle Lamp Company*. I did, however, testify in the case of *The Mantle Lamp Company of*

America v. *George H. Bowman Company.* As I remember, we made about fifteen hundred of this type of jar, and continued to manufacture that type through the summer of the first year. Thereafter, we continued to manufacture heat-insulated receptacles, but the kind thereafter manufactured by The Macomb Manufacturing Company had an inner container made of earthenware with a steel jacket. The neck was extended over the top of the earthenware container. The neck had a cam screw shape and there was cement poured in between the steel jacket and the earthenware container. There was insulated cork between the walls of the container and the jacket. The bond I have just described was plaster-of-Paris and Portland cement. The neck of the jacket was threaded and the container had some grooves in it, one or two circumferential grooves running around it. The cement in liquid form was poured in around the neck and formed in the screw on the neck and the grooves on the inner container. Of this last type of container there were probably fifty thousand made, I don't remember. We discontinued the manufacture and sale of the first type, as shown by Plaintiff's Exhibit 8, because it would not hold heat as long as the second type (Rec. 49-55).

If Blair exercised mere mechanical skill and followed old teachings, as held by the Seventh Circuit Court of Appeals, why was it that all others who worked in the art of heat-insulation over the years did not profit by the disclosures of the art. If prior disclosures were such as to have enabled those who were skilled in the art of heat-insulation to produce the Blair device, then the skilled mechanics would readily have succeeded.

It may be observed that on fundamentals respecting the Blair patent, there is really no difference between the opin-

ions in the *Macomb* and *Monarch* cases and that of the Sixth Circuit Court of Appeals in the *Bowman* case, because in the latter case, as in the case at bar, the *facts* are shown that the prior art, including the patents to Fox, Heath and Clisbee, did not teach the art of Blair's later contribution, and that those skilled in the art, with Blair's actual jug before them, but without the explaining disclosure of the Blair patent even then by inexact copying, failed to attain Blair's result. This vital proof was not in the records of the *Macomb* and *Monarch* cases. It is present in the instant record.

These skilled manufacturers failed to recognize the advantages of the Blair device.

Certainly no lack of invention has ever been shown herein. The burden of proof of course is upon the one attacking validity to show by a high degree of proof, the truth of his assertion. (See *Deering* v. *Winona Harvester Works*, 155 U. S. 286).

On the contrary this record instead of disclosing satisfactory evidence of invalidity, shows affirmatively that invention exists.

The record affirmatively shows that more than mechanical skill was involved in the Blair invention. *Can it be that those laboring in the heat-insulating art, over many years, those skilled manufacturers who have testified in this case, were not possessed of even that mere mechanical skill sought to be attributed to Blair?* The law postulates mechanical skill in them—was not Blair's successful act necessarily of different quality? Should it not be regarded as invention?

It is submitted that the argument that the Blair device does not show any invention, and that the constructions set forth in the claims in suit are mere aggregations of old devices, already well known, was conclusively answered by the Supreme Court when, it is said in the case of *Webster Loom Co.* v. *Higgins*, 105 U. S. 580, 591:

> "This argument would be sound if the combination claimed by Webster was an obvious one for attaining the advantages proposed,—one which would occur to any mechanic skilled in the art. But it is plain from the evidence, and from *the very fact that it was not sooner adopted and used, that it did not, for years, occur in this light to even the most skillful persons.* It may have been *under their very eyes*, they may almost be said to *have stumbled over it;* but they certainly *failed to see it, to estimate its value, and to bring it into notice.* * * *"*
>
> *"Now that it has succeeded, it may seem very plain to any one that he could have done it as well. This is often the case with invention of the greatest merit."* (Emphasis supplied.)

The long interval between the granting of the principal patents relied upon by appellee and the advent of the Blair device coupled with its long continued use renders the following language of the Supreme Court in *Carnegie Steel Co.* v. *Cambria Iron Co.* (185 U. S. 404), at page 446, peculiarly appropriate:

> "It should be borne in mind that this process was one not accidentally discovered, but was the result of a long search for the very purpose. The surprise is that the manufacturers of steel, having felt the want for so many years, should never have discovered from the multiplicity of patents and of processes in-

troduced into this suit, and well known to the manufacturers of steel that it was but a step from what they already knew to that which they had spent years in endeavoring to find out. *It only remains now for the wisdom which comes after the fact to teach us that Jones discovered nothing, invented nothing,* accomplished nothing." (Emphasis supplied.)

Point IV.

The Court of Appeals, Seventh Circuit, erroneously labeled Blair's contribution as being the result of mechanical skill only, when the evidence shows those highly skilled had failed.

The Circuit Court of Appeals for the Seventh Circuit was wrong when it first said that only mechanical skill, and not invention, was involved in the Blair invention. The Sixth Circuit Court of Appeals points out clearly why the Seventh Circuit was wrong in selecting three patents (Heath, Clisbee and Fox) from non-analogous arts and ascribing to ordinarily skilled mechanics its own hindsight in combining them.

The Seventh Circuit Court of Appeals was wrong again when it necessarily postulated validity of the Blair patent over the prior art in certifying questions under the Disclaimer Sections of the Patent Act for this Court to answer and though the questions were not directly answered sufficient advice was given by this Court to permit said Circuit Court of Appeals to answer the disclaimer question..

The present record now clearly shows that those highly skilled in the art, even with the Blair device before them, failed to see that a single path of heat-conductivity, and

dry insulation were necessary in combination with the other essentials disclosed by the Blair patent.

Blair made a valuable contribution to the art and his patent is valid.

Point V.

The cited prior art is not pertinent.

The answer herein cites many domestic and foreign patents (Rec. 349-475 incl.), as well as a publication (Rec. 255), in support of the defenses of lack of novelty and lack of invention. Respondent can not refer to any single prior disclosure which includes the features of the Blair patent. The novelty of the Blair jug is therefore clear. The defense of non-invention is answered by the proved inability of those highly skilled in the art who knew of the infirmities of the thermos bottle, to devise a successful heat-insulated receptacle without using a vacuum. The public waited years for the advent of a successful heat-insulated receptacle of the non-vacuum type. No single patent of the prior art provided it (Defendant's Expert Session's testimony (Rec. 144).) That all of the prior art together did not teach, cannot be gainsaid. No speculations now made as to what might have been, are comparable with the fact that it did not teach anyone. If that very old non-vacuum art was capable of teaching Blair's invention, a successful heat-insulated receptacle of the non-vacuum type should have been on the market long before the advent of the more recent thermos bottle. The fact that the skilled makers of heat-insulated receptacles did not make a satisfactory heat-insulated receptacle of the non-vacuum type until they saw and appropriated Blair's invention argues strongly for the invention of Blair.

The other cited art is even less relevant than the patents to Heath, Clisbee and Fox and is therefore discussed only in Appendix "F."

To use the language of the often quoted opinion in the case of *Diamond Rubber Co.* v. *Consolidated Rubber Co.*, 220 U. S. 428-440, the respondent "gives its praise to the prior art; "and it gives the 'Blair jug' the tribute of its imitation."

Point VI.

In case of doubt, commercial success should weigh heavily in favor of invention.

It is of great significance that every commercial jug that has been referred to in the testimony in this case has finally come to be a counterpart of the Blair device (which is a fact that still obtains for all these years beginning with 1919). Is it not extraordinary with the demand that the advent of the Blair device created, and with the sales by the appellant of about one million of these jars (Rec. 77), together with the sales of competitors of large numbers, that after the passing of fifteen years all these other devices are still Chinese copies of the Blair device?

The immediate adoption and the large sales resulting from the placing of the Blair device and other similarly-constructed devices on the market speaks eloquently of the invention of Blair. During the first three days one salesman sold close to ten thousand dollars' worth of Blair's devices, and the appellant in a very short time sold a million such jugs (Rec. 75). Competitors, as soon as they adopted the Blair device, had large and increasing

sales. The public has given its tribute to the Blair invention and the manufacturers now in the field have given it their praise by continuing to manufacture Blair's device.

In cases where the Court may be in doubt as to whether or not mechanical skill or inventive genius was employed in the creation of the device in question, commercial success has often been used and should be used as the final determining factor.

Point VII.

Infringement is clearly shown.

The witness Davis (Rec. 29, 30) in describing the infringing device (Pltf.'s Ex. 6) uses language which literally applies to the device of the Blair patent (Rec. 342) which embodies a jacket having sections 2 and 4; a single wall frangible and vitreous container 11; comminuted material 31 between said jacket and said container; a threaded neck 5 for said jacket which is threaded and secured to said container, and also has an inturned flange 6 extending over said container; a bond 14 which interlocks with the threads of said neck, and a stopper 17 which is spaced from said neck. The substance used by the infringing device as a bond and seal is not the one referred to in the Blair patent as being the preferred one, but it is an interlocking and adherent bond, and an efficient seal to prevent moisture from entering the space between the container and the jacket (Rec. 43). The functions of all of these elements are exactly the same as those described in the patent.

There is no serious question of infringement here.

Point VIII.

The claims in suit are all applicable to the accused device.

The claims of the Blair patent are, excepting claims 2, 15, 16, 19 and 20, all applicable to the infringing Plaintiff's Exhibit 6 (Rec. 32), and of these claims those following will serve as examples:

1. A heat-insulated vessel of the non-vacuum type having an outer jacket of non-frangible material, an inner container of frangible material, said inner container being bonded to and pendently supported from said jacket, and heat-insulating and shock absorbing means surrounding said container for limiting oscillations of said container while permitting expansion thereof by changes of temperature.

9. A heat-insulated vessel having an outer jacket and an inner single-wall container provided with a neck, a body of heat-insulating material surrounding said container, a closure for the neck of said container separated from the inner wall of said neck, by a heat-insulating air space and a heat-insulating gasket disposed between said neck and said closure.

Since a casual reading of any of the claims, other than 2, 15, 16, 19 and 20, will show their applicability to the infringing devices (Pltf.'s Ex. 6) an analysis thereof is omitted.

Point IX.

Although the District Court based its decision partly on prior invention, none was shown.

The appellee contended and the District Court found the Blair patent in suit void because of alleged prior invention, particularly as shown in the patents to Davis and Sunderlin, No. 1333795 (Rec. 420) and the patent to Simonson and Blair, No. 1309967 (Rec. 413), both of which applications for patent were filed in the United States Patent Office prior to the filing of the application of Blair. The said patentees and joint patentees were all employees of the appellant herein at the time the various applications for patent were filed. The order in which the various applications were filed was governed by the exigencies of the various cases and the condition of the country, then at war (1917-1918). Davis, one of the joint inventors in the Davis and Sunderlin patent, and Simonson, one of the joint inventors in the Simonson and Blair patent, both testified in this case. Simonson testified that he saw a device similar to the one described in the patent in suit made by Blair in the autumn of 1917 (Rec. 207) and that the problem on which he worked in December 1917 and the spring of 1918 later matured into the Simonson and Blair patent. It related to a vacuum bottle and not a heat-insulated receptacle of the non-vacuum type.

Cortland W. Davis, one of the joint inventors in the Davis and Sunderlin patent, No. 1,333,795 (Rec. 420) testified that with the Blair device described in the patent in suit before him, he and his assistant, Sunderlin, who are the joint inventors of Patent No. 1333795, added a yielding diaphragm to the Blair device so that the container would not fracture at the neck if subjected to the

unusually severe use that it was contemplated it would be subjected to by the United States Army (Rec. 199).

The application for the patent to Davis and Sunderlin was filed in the United States Patent Office prior to the preparation and filing of the application here in suit because of the desirability of getting an application on file in the Patent Office for the Davis and Sunderlin device prior to placing them on the market under the contract with the United States Government (Rec. 211, 212).

In addition thereto, in the file wrapper of the patent to Blair here in suit will be found the affidavit of Blair, long since dead, to the effect that his invention antedated the Davis and Sunderlin invention (Rec. 279). No evidence to contradict that affidavit or to contravert the testimony of Davis, Simonson and Johnson was offered by the respondent and it stands without challenge.

Point X.

The Blair patent is not invalid by reason of the failure to file a disclaimer, because:

(a) After the original finding of invalidity of the claims in suit by the Circuit Court of Appeals for the Seventh Circuit in the *Monarch* and *Macomb* cases, no substantial and separable part of the thing patented remained which the patentee could save by disclaimer;

(b) Petitioner has unceasingly continued its efforts to establish the validity of its patent; and

(c) Petitioner has not acquiesced in any finding of partial invalidity by endeavoring to enforce a decree holding a portion valid and abandoning, without appeal or disclaimer, portions found invalid.

Sections 4917 R. S., 35 U. S. C. A. 65, and 4922 R. S., 35 U. S. C. A. 71 (Appendix E.), provide that a patentee who has claimed more than that to which he is entitled may under certain circumstances save as valid a portion of his patent, providing the valid portion can be separated from the invalid portion and constitutes "a material and substantial part of the thing patented."

In the light of this Court's decision in the case of *Triplett* v. *Lowell*, 297 U. S. 638, and the guiding observations made therein with respect to this cause when this Court dismissed the certificate from the Seventh Circuit Court of Appeals relating to disclaimers, there could have been no necessity for filing a disclaimer in this cause at any time because no material or substantial part of the patent remained after the decisions of the Circuit Court of Appeals for the Seventh Circuit in the *Monarch* and *Macomb* cases. The District Court however did not find that after all of the claims in suit in those two cases (all claims except 2, 8, 9, 15, 16, 19 and 20) had been found to be invalid for lack of invention and as involving only mechanical skill, that substance remained in the unadjudicated claims which could have been validated by disclaimer and which would have brought into force the provisions of the disclaimer statutes.

As the petitioner construes this Court's opinion, in the *Triplett* v. *Lowell* case, after the finding of invalidity in the *Macomb* and *Monarch* cases, the petitioner then had the option of disclaiming claims so held invalid and thereby preserving the remaining ones for what they were worth, or it might relitigate the patent including the invalidated claims in another forum or even in the same one.

Having chosen to relitigate, the petitioner, by prosecuting its suit in the Sixth Circuit against the Bowman Com-

pany took the risk of losing its entire patent if the Circuit Court of Appeals for the Sixth Circuit had likewise held invalid the previously adjudicated claims.

Upon the finding of validity of Claim 1 without prejudice to petitioner's rights under any other claims by the Sixth Circuit Court of Appeals, there was then no occasion to disclaim either within a reasonable or any time and the statute does not apply any more than it would to a patent containing but a single claim.

The affirmance of the Circuit Court of Appeals for the Seventh Circuit of the District Court's finding herein without reversal of that portion of the District Court's findings invalidating the entire patent makes necessary a consideration of the claims of the Blair patent in order that a determination of this question may be made by this Court.

The Blair patent No. 1435199 covers a heat-insulated receptacle of the non-vacuum type and broadly speaking its several claims, all in apt language, include as its main structural features,

(1) An outer metallic (non-frangible) jacket;

(2) An inner container either frangible or vitreous;

(3) Said container being sealed, bonded to, or pendently supported or sustained in, the jacket;

(4) Heat-insulating and shock-absorbing comminuted material disposed between the walls of the jacket and the container.

The claims not in suit in the *Macomb* or the *Monarch* cases were 2, 8, 9, 15, 16, 19 and 20. The narrower features claimed in those unadjudicated claims included as additional elements, a paper lining substantially co-extensive with the jacket (claims 2 and 15), a closure for

the mouth of the container separated from the inner wall thereof (claims 8 and 9), a silver coating on the outer side of the inner container (claim 16), and a vitreous stopper with resilient gasket, or a recessed resilient gasket (claims 19 and 20).

The additional subject matter of the omitted claims therefore refers in each instance only to minutia. While these claims notwithstanding this, might be valid if the broader dominant combination in the other claims were valid, when it is postulated that the broader claims are invalid, it necessarily follows that the minutia in the unadjudicated claims would not impart invention with respect to them, particularly in view of the finding of the Court of Appeals in the *Macomb* and *Monarch* cases that only mechanical skill and not inventive genius were used in combining the essential elements of the invention. In its broader aspect, the entire substance of the patent was gone and no material portion thereof remained which could be salvaged by disclaimer.

In view of the finding of this Court in the case of *Altoona Publix Theatres* v. *American Tri-Ergon Corporation, et al.*, 294 U. S. 477-492, that "upon the filing of disclaimers the original claims were withdrawn from the protection of the patent laws, and the public was entitled to manufacture and use the device originally claimed as freely as though it had been abandoned" the futility of endeavoring to maintain its patents with respect only to claims containing as novel features in addition to dedicated matter only a paper lining, a separated stopper, a silver-coated container, or a vitreous stopper with a gasket, is readily apparent, and appellant's view is that the disclaimer statutes were not intended to and cannot apply under these circumstances.

Continuous Litigation Made Disclaimer Statute Inapplicable.

A further consideration is that the time that has elapsed between the original finding of invalidity and the present time cannot be charged to the appellant on the ground of unreasonable delay. This because of the continuity of petitioner's activities in endeavoring to maintain the validity of its patent in the various available forums since such finding.

Petitioner, upon the finding of invalidity, realizing that all of the substance of its patent was gone, then adopted the course which deceived no one as to its intentions. It was not holding out invalid claims as a threat while it contemporaneously endeavored to enforce claims found valid but rather it began a long continuous up-hill fight to vindicate its position, which culminates in this appeal, and hoped to ultimately establish the validity of the dominant structural features of its patent. Necessarily such a course of action received set-backs, rebuffs and delays. Its course of action is set forth under the heading, "Prior Litigation involving the Blair Patent," and for sake of brevity is not repeated.

The petitioner has acted with such promptness as the circumstances permitted and should be entitled to the benefit under the exception to the rule implied by this Court.

The Disclaimer statute, if construed to penalize a patentee under the circumstances herein arising so as to bar him by reason of his failure to disclaim, would be contrary to the spirit of the enactment. As is well known, under the early practice, patents invalid in part were invalid *in toto*.

The disclaimer statutes were intended to soften this harsh rule. **Ample justification for the appellant in its position is found in the differences of opinion that exist now between Circuits as to the validity of the patent in suit.**

Petitioner believes that the disclaimer statutes are not applicable to the instant situation if construed as a remedial statute rather than a penal one, for to construe it against the petitioner would be to penalize it to a greater extent than if the statute had never been passed. For instance, upon the finding of invalidity for want of invention of all the substantial parts of petitioner's patent by the Circuit Court of Appeals for the Seventh Circuit, the patent, insofar as that Circuit is concerned, would have been entirely invalid. The petitioner, however, would have had the right of adjudication in another circuit and having done so successfully would have had the right to seek intervention of this court on the writ of certiorari to finally determine the validity or invalidity of the patent without any question of necessity for disclaimer arising and without the intervention of any such defense which might bar it arising in a later suit so that under these circumstances the statute intended as a remedy becomes a penalty, a weapon instead of a bulwark.

CONCLUSION.

The jug of the Blair patent is novel. The respondent's expert witness Sessions was unsuccessful in his effort to reconstruct it from six prior art patents.

The Sixth Circuit Court of Appeals was correct in holding that it involved invention over Fox's carboy of 1890, Clisbee's can of 1887 and Heath's armored bottle of 1879, thus disagreeing with the Seventh Circuit Court of Appeals in its *Monarch* and *Macomb* cases.

The Sixth Circuit Court of Appeals was right in holding that the evidence of invention in the record before it—alone justified a different result from that in the *Monarch* and *Macomb* cases, and the Seventh Circuit Court of Appeals was wrong in not finding invention in the Blair jug when that same persuasive evidence upon invention came before it for the first time in the instant case.

Among the reasons for these conclusions are:

(a) The Fox, Clisbee and Heath devices over many years did not suggest the Blair invention to any one.

(b) These old devices fall far short of supporting that clear, invalidating conviction necessary to overcome the presumption of the validity of the grant to Blair.

(c) Men most highly skilled and experienced in this art failed to appreciate the why of Blair's success with the Blair device before them, intact and then dissected, giving cogent affirmative proof of the lack of obviousness of Blair's contribution.

(d) The Blair jug solved a real problem.

(e) It still remains a unique solution.

(f) Blair's jug is very widely used.

Infringement is plain. The Disclaimer Statute, designed to protect real inventors, afforded no remedy to the petitioner. It has followed the only course open to it.

It is respectfully submitted that the petitioner should be granted the relief here sought.

GEORGE I. HAIGHT,
W. H. F. MILLAR,
M. K. HOBBS,
Counsel for Petitioner.

APPENDIX A

No. 5412

UNITED STATES CIRCUIT COURT OF APPEALS

FOR THE SEVENTH CIRCUIT

OCTOBER TERM AND SESSION, 1936.

THE MANTLE LAMP COMPANY OF AMERICA, *Appellant*,

vs.

ALUMINUM PRODUCTS COMPANY, a corporation, *Appellee*.

Appeal from the District Court of the United States for the Northern District of Illinois, Eastern Division.

November 28, 1936.

BEFORE EVANS AND SPARKS, *Circuit Judges*, and LINDLEY, *District Judge*.

SPARKS, Circuit Judge. Appellant sued appellee for infringement of patent No. 1,435,199, which was granted upon the application of Blair and issued to appellant, the assignee of the invention and application, on November 14, 1922. The defense was invalidity and non-infringment. The bill was dismissed for want of equity, and from that decree this appeal is prosecuted.

The validity of this patent was heretofore contested in this court in *Macomb Manufacturing Company* v. *The Mantle Lamp Company of America*, 22 F. (2d) 93, and in

Monarch Company, Inc. v. *The Mantle Lamp Company of America*, 22 F. (2d) 95, and claims 1, 4, 5, 6, 7, 10, 11, 12, 13, 14, 17, 18, 21, 22, 23 and 24 were held invalid for lack of novelty.

Subsequently, appellant, instituted a suit for infringement of the same patent, in Ohio, against the George H. Bowman Company. The defendant answered, asserting invalidity, and thereafter did not appear and was not represented. The District Court held the patents invalid on the authority of the *Macomb* and *Monarch* cases, *supra*, stating in its unpublished opinion, "• • • as the latter were rendered on what I understand to be substantially the same evidence of lack of invention, which can be found in the record before me • • • I regard myself bound to follow them." On appeal, the court of Appeals for the Sixth Circuit reversed the District Court and held claim 1 valid and infringed. In that appeal the appellee did not not appear and was not represented.

The appellant thereupon sought certiorari in the *Bowman* case on the ground of a conflict of decision between the Sixth and Seventh Circuits. This was denied by the Supreme Court because the petitioner had been successful in the cause in which it sought certiorari.

There was a difference in the evidence submitted in the *Bowman* case and in the case at bar from that presented in the *Macomb* and *Monarch* cases. It consisted of the testimony of witnesses Brainard and Terry who did not testify in the last named cases.

Although the validity of this patent is a close question, we are not convinced that the additional testimony is sufficient to warrant us in departing from the former rulings of this court in the *Macomb* and *Monarch* cases.

Decree affirmed.

APPENDIX B

No. 3812

UNITED STATES CIRCUIT COURT OF APPEALS

FOR THE SEVENTH CIRCUIT

OCTOBER TERM, 1926, APRIL SESSION, 1927.

MACOMB MANUFACTURING COMPANY,
Appellant,
vs.
THE MANTLE LAMP COMPANY OF AMERICA,
Appellee.

Appeal from the District Court of the United States for the Southern District of Illinois, Northern Division.

May 28, 1927.

BEFORE ALSCHULER, EVANS and ANDERSON, *Circuit Judges.*

ANDERSON, Circuit Judge: This is an appeal from a decree holding patent No. 1,435,199, issued to the appellee as assignee of Lewis Van Deventer Blair, valid, and claims 1, 4, 5, 6, 7, 10, 11, 12, 13, 14, 17, 18, 21, 22, 23 and 24 thereof infringed.

Appellee, in its brief, after differentiating these 16 claims, says they "are not redundant, but define one or another of the aspects of the invention." 1 and 17 are put forth as "examples" of the claims. These are:

1. A heat-insulated vessel of the non-vacuum type, having an outer jacket of non-frangible material, an

inner container of frangible material, said inner container being bonded to and pendently supported from said jacket, and heat-insulating and shock-absorbing means surrounding said container for limiting oscillations of said container while permitting expansion thereof by changes of temperature.

17. A heat-insulated receptacle of the non-vacuum type, including a multi-section outer jacket, a strong vitreous single-walled inner container sustained in the upper portion of said outer jacket, resilient heat-insulating material disposed between said packet and said container for limiting oscillation of said container while permitting expansion thereof by changes of temperature, one section holding a cover, and a seal to prevent moisture from reaching said insulating material.

The patent says: "The invention relates to receptacles of the heat-insulated, non-vacuum type." Such receptacles are found in prior patents. We will therefore consider this case without reference to the heat-insulated, vacuum receptacles so common when the patent was issued.

After stating, in general terms, the state of the art at the time of Blair's application, appellee says: "The problem, therefore, which confronted Blair, • • • was the production of a receptacle, without the intervention of a vacuum and of relatively large size, for the maintenance for many hours of a desired high or low temperature of food or liquid contents, and of a better shock-resisting character."

This problem, in the language of appellee, was solved by the following means:

> "His receptacle includes a metallic protective jacket and a single wall container."

"This container is fixedly and firmly connected at its upper end with the top of the outer metal jacket by means of a bond."

"The space between the jacket and the body of the inner container, as distinguished from the neck portion, contains comminuted material, which material impedes the transfer of heat by induction between the inner container and the jacket and limits the pendulous vibrations of the container within the jacket."

"The comminuted material, if allowed to become moist, would be a good conductor of heat. But moisture is kept therefrom by an inturned flange extending from the neck of the jacket, which flange while acting as a seal also protects the frangible neck of the container and positions the container in the packet while the parts are being assembled. The means constituting a bond and also acting as a seal, which hold the neck of the container in place within the neck of the jacket, also operates to prevent moisture from reaching the comminuted material, in case moisture should pass between the flange and the neck of the container."

And appellee continues:

"It will thus be seen that all of the elements above enumerated are tied together in a true combination producing a single and useful result and that if any one element, the jacket, the container, the spacing, or the packing were omitted, or some sealing means were not used to keep moisture away from the packing, and to pendently support the container so that only one path of heat conductivity is afforded, the device would not be such as efficiently to perform its intended functions."

The prior art discloses heat-insulated and shock-resisting receptacles of the non-vacuum type. Prior patents show each of the elements enumerated by appellee. We need only to call attention to three, which appear in the record: No. 211,092, issued to Heath, January 7, 1879; No. 358,732, issued to Clisbee, March 1, 1887; and No. 438,149, issued to Fox, October 14, 1890.

Heath calls his invention "an encased bottle," and says: "the object sought for being the prevention of breakages during transportation." This is the shock-resisting object of the patent in suit. Heath discloses an outer jacket, a single wall container, spacing between the jacket and the container, and the packing therein. The container had its neck extended up through the jacket, and the jacket and the container connect or contact with each other only at the extreme end of the neck. At no other point is the container in contact with the jacket. So far, Heath describes the construction of the patent in suit.

Clisbee calls his invention an "insulated can," and says:

"The object of this invention is to furnish an improved insulated can for coffee and other beverages • • • so that the liquid may retain its heat, • • •." Clisbee has the outer jacket, the inner single wall container, the spacing between the jacket and the container, the packing in the spacing, and the neck of the container connecting with the jacket at the upper end of the neck and nowhere else. Blair positions these elements as they are positioned in Heath's and Clisbee's patents.

In these two patents we have disclosed every element claimed to be in the patent in suit, except the bond or bonding means which appellee says holds the container firmly and fixedly, pendently positioned in the jacket. This

use of a bonding means to thus hold the container firmly and fixed in its position, and also to prevent moisture from getting into the packing, is disclosed in the Fox patent.

This Fox patent is for a carboy, and shows an outer jacket, called a box or frame, a single wall container inside the jacket with a neck extending up through the jacket, and packing between the container and the jacket, and the patentee says: "Around this neck of the carboy I tightly pack plaster-of-paris or other suitable material, as shown at B (in the drawing), for the purpose of firmly holding the carboy in place, * * * and also for the purpose of excluding moisture or water." And, again: "B is a packing of plaster-of-paris or other suitable material, intended to hold the carboy firmly in place within the box or frame enclosing it and to exclude water or moisture from the packing C."

Thus we have all the elements in appellee's claims disclosed in these three prior patents, each operating in its old way and effecting its old result, and the only question to be decided is: Did it involve invention for Blair to take the bond from Fox and the other elements from Heath or Clisbee, or both of them, and assemble them in one heat-insulated, non-vacuum receptacle?

With Heath, Clisbee and Fox in the field—Heath and Clisbee both showing (except the bond between the container and the jacket) the construction adopted by Blair, Heath's object being shock resistance and Clisbee's heat insulation, both using the same means and construction—did it involve invention to take Fox's bond and add it to Heath or Clisbee? We think this involved mechanical skill, and not inventive genius. In the language of the Supreme Court in *Hollister* v. *Benedict Mfg. Co.*, 113 U. S. 59, on

page 73, 5 S. Ct. 717, 724, (28 L. Ed. 901): "It is but the display of the expected skill of the calling, and involves only the exercise of the ordinary faculties of reasoning upon the material supplied by a special knowledge, and the facility of manipulation which results from its habitual and intelligent practice." A person skilled in the art pertaining to heat-insulated receptacles of the non-vacuum type, knowing what had been done before, and seeing these various elements performing their functions in the patents above mentioned, would not require a flash of genius to combine with the structures shown by Heath or Clisbee a bond to hold the container in position and at the same time prevent moisture from getting into the insulating packing.

We are not now concerned with the particular bond set forth in appellee's patent, which says: "The substance of which the bond is composed is, preferably, a prepared shellac which is fully described in United States Letters Patent No. 1,309,967, granted to Simonson & Blair on July 15, 1919." If appellant used the bond described in that patent, for such use the suit should be for its infringement; but it is not claimed that appellant used this particular bond. It used plaster-of-paris, or a mixture of plaster-of-paris and cement or white lead, none of which, singly or combined, is the bond of appellee.

The result obtained by Blair may be a better structure than was ever before produced, and yet, for the lack of novelty of device, or new result produced, it may have no patentable quality. He has assembled—combined, in the ordinary sense—old and well-known elements, but he has not made an invention.

Reversed, with direction to dismiss the bill of complaint for want of equity.

Rehearing denied Dec. 5, 1927.

APPENDIX C

No. 3889

UNITED STATES CIRCUIT COURT OF APPEALS

FOR THE SEVENTH CIRCUIT

OCTOBER TERM, 1926, APRIL SESSION, 1927.

MONARCH COMPANY, INC. AND THERM-A-JUG COMPANY, INC.
Appellants,
vs.
THE MANTLE LAMP COMPANY OF AMERICA,
Appellee.

Appeal from the District Court of the United States for the Northern District of Illinois, Eastern Division.

May 28, 1927.

Before ALSCHULER, EVAN A. EVANS, and ANDERSON,
Circuit Judges.

ANDERSON, Circuit Judge: Appellants filed suit against appellee for unfair competition in the sale of heat-insulated receptacles designed to keep hot liquids hot and cold liquids cold. Appellee filed a counterclaim charging that plaintiffs, in making their receptacles, infringed patent No. 1,435,199, owned by appellee and considered in the case of *Macomb Manufacturing Co.* v. *Mantle Lamp Co.*, (No. 3812) 22 F. (2d) 93, decided this day.

The court dismissed the bill of complaint for want of equity, upheld the counterclaim, and adjudged the patent valid and infringed as to the same claims relied on in No. 3812. The only question presented upon the issue of unfair competition is whether the decree was right upon the evidence. We have examined the evidence, and are satisfied that it does not warrant a decree for appellants upon this issue. That part of the decree dismissing the bill of complaint is affirmed.

But we cannot approve the decree upon the patent branch of the case. For the reasons stated in our opinion in the *Macomb* Case, we hold the patent invalid. This part of the decree is reversed, with direction to dismiss the counterclaim. Costs shall be divided equally between the parties.

APPENDIX D

Filed Nov. 3, 1931
John W. Menzies,
Clerk.

No. 2506

UNITED STATES CIRCUIT COURT OF APPEALS

SIXTH CIRCUIT

THE MANTLE LAMP COMPANY OF AMERICA,
Appellant,
vs.
GEO. H. BOWMAN COMPANY,
Appellee.

Appeal from the District Court of the United States for the Northern District of Ohio.

Decided November 3, 1931.

Before DENISON AND MOORMAN, *Circuit Judges, and* SIMONS, *District Judge.*

DENISON, Circuit Judge: This is the usual patent infringement suit, based upon the Blair patent, No. 1,435,199, of November 14, 1922, for a "heat insulated receptacle." It discloses the type now common on the market, which comprises a large mouthed receptacle, holding a gallon or more, insulated within an outer casing which is in the general form of a pail or a large bottle, and which efficiently keeps a substantial amount of food or drink hot or cold for several hours. The patent was sustained in

the *Monarch* and the *Macomb* cases, in the Northern District of Illinois(unreported), but these decrees were reversed by the Seventh C. C. A., (22 Fed. (2d) 93, 95), and the patent was held to be lacking in invention.

In the present case, the defendant filed an answer relying upon the former decision and setting up a long list of earlier patents. It did not take proofs and did not appear at the final hearing in the court below. The plaintiff voluntarily put in evidence all the patents set up in the answer. The District Judge felt obliged to follow the earlier decision, and dismissed the bill. Upon this appeal the defendant did not appear; and we accept the assurance of plaintiff's counsel that they know of no reason for defendant's default except lack of sufficient pecuniary interest. At our suggestion, we have been furnished with copies of the records and of the briefs in the former cases, and have thus been quite fully informed as to the proofs and the contentions therein.

The modern art of efficient insulated receptacles for domestic use seems to have been begun about 1907, with the now very familiar thermos bottle, and with similar structures known as "icy-hot", or by other names. These comprised a double wall of glass with an intervening vacuum; from necessities of manufacture they were very delicate and fragile; and they had usually no greater capacity than one quart; though a two-quart size was made to some extent. Beginning about 1907, this vacuum type for keeping liquids hot or cold, became exceedingly popular. The invention now involved was put upon the market about 1918, under the trade name "Aladdin." It comprised a much larger receptacle, holding from one up to three or four gallons, and, by reason of its size and permissible large neck, was adapted to keep hot or cold not

only liquids but solid or semi-solid food. It was well received and had large and increasing sales. Within a short time, it and similar articles made by others, and which are said to be infringements, had established their position as practically a new article of manufacture, and plaintiff was far and away the leader in the sales. Up until the proofs were taken it had sold over one million of them.

What Blair did, in substance, was to depart from the vacuum type; to rely for his heat insulation upon a relatively non-conducting packing between his outer and inner walls; to use an outer casing made of metal, which would be strong enough to receive ordinary shocks, and an inner container made of glass or some vitreous material that would allow the minimum of heat to escape therefrom; and to unite the outer and inner casings at their upper or neck ends, so that the inner would be pendently supported by the outer and so that the unity means or bond should also serve as an insulator against heat or cold and as a seal to exclude air or moisture from the packing material. He was thereby enabled to, and was the first who did, put on the market a strong and satisfactorily efficient portable insulated jar or can, of relatively large size. There was, of course, nothing new in having merely the outer and inner vessels, with a packing between; but both the face of the patent and a review of the prior art and the oral testimony, indicate that Blair's useful novelty, which is incorporated in several of the claims, and which we take to be the dominant characteristic of his invention, consisted in hanging the inner container to the outer shell at the upper extremity of each by a bond which was sufficient for this supporting function and which also served the essential insulating and sealing purposes. He was thus enabled to avoid relying upon the packing material for supporting the inner container from below—a function

which it could only imperfectly perform,—and to avoid any extensive contact between the inner receptacle and the outer casing, whereby there would be any substantial channel for the escape of heat. Obviously, the use of a bonding material between the two instead of having any mechanical direct union, gave opportunity for interposing a comparatively non-conducting material. So far as the record indicates, there is no material used by the plaintiff or by infringers, which is suitable for this bond, which is not also, in considerable degree, heat insulating.

Claim 1 is given in the note,[1] and is sufficient to indicate the limits of the controversy. For the outer and inner containers, the parties have not used any materials other than metal for the outer and a vitreous or glasslike material for the inner. There is nothing to show that the more generic terms, non-frangible and frangible, have practically any wider application which might extend the field of prior use. The claim may, therefore, as well be read as if it called for containers that were respectively metallic and glassy.

The record leaves no doubt that Blair's combination was new, and its utility is demonstrated by the large sales and the adoption by infringers. The argument against validity is that all the elements were old and there was no invention in putting them together. The earlier existence

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[1] A heat-insulated vessel of the non-vacuum type, having an outer jacket of non-frangible material, an inner container of frangible material, said inner container being bonded to and pendently supported from said jacket, and heat-insulating and shock-absorbing means surrounding said container for limiting oscillations of said container while permitting expansion thereof by changes of temperature.

of the elements must be conceded; outer metallic casings used with an inner glass receptacle and with interposed insulating packing were old; metal and glass had been bonded together for some purposes and to some extent by material which would adhere to each; and an inner receptacle of bottle shape had been hung by its neck from the indrawn neck of an outer casing through mechanical direct contact. All these constructions had defects which apparently had prevented them,—something had,—from going into general use. The packing interposed between the outer and inner parts was certain to become, with use, somewhat denser and to leave the inner imperfectly supported and subject to jar and breakage. If the inner receptacle had its neck extended out so that it would rest upon the outer casing, and might, *e. g.*, be soldered thereto, a path was given for the escape of heat. By adopting the plan of pendent support, Blair insured against failure of the interposed packing to support sufficiently, and by effecting this support by a bond between the two, rather than by a mechanical union, and by using for the bond this described material, or any other which has been found effective for that purpose, he at the same time gave support, prevented the escape of heat and sealed out the air and moisture from the packing. Further, this method of bond support was mechanically more efficient and satisfactory than the other methods which had been tried.

The substantial character of Blair's step and its non-obviousness, are demonstrated by the testimony. The manager of a leading manufacturer of bottles of the thermos or vacuum type, testifies that when they realized the demand for larger receptacles, they tried to enlarge their thermos bottle, the "icy-hot," using its method of manufacture, and they found it impossible. The mechan-

ical difficulties of handling hot glass in the manufacturing process, so as to produce a large and heavy receptacle, were insuperable. Thereupon, in the endeavor to make an article to compete with the Aladdin, then on the market, without adopting the pendent-bond-support, they tried the best plan they knew. They inserted between the two bottoms supporting springs, which would hold the upper one against vibration and compensate for any settling in the packing; but when they produced this article for the market, they found the best they could do was to maintain the temperature three or four hours, as against six or eight for the Aladdin. The manager says that for his own use he discarded his own and bought an Aladdin. The attempt to market this article was abandoned.

The manager at the time, of the McComb Company, one of Blair's chief early competitors and defendant in one of the Illinois cases, testifies in this record. The McComb Company began to make this non-vacuum type in 1921 (the Blair patent application was filed in 1919) and sold about 1500 of its devices, which had an earthenware container supported at the neck by the indrawn neck of the metallic casing. There was no bond or seal,—at least, not in any effective way. This form did not satisfy the market, after one season's trial, it was abandoned and Blair's patent-bond-support adopted.

The record in the *Monarch* case contains, in our view, most persuasive evidence that Blair's advance step was not one obvious to those skilled in this art. The Monarch Company was engaged for two or three years in the effort to make a satisfactory article to meet the need for a larger and stronger "thermos bottle." Its mechanics,—certainly skilled,—tried several different forms, marketed

some, abandoned them, and eventually came to and adopted Blair's pendent-bond-support form, a year or more after the Aladdin was on the market. [1]A summary of this evidence is in the note.[2]

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[2]In 1918 the Monarch Company began its attempt to develop the non-vacuum type so as to get a relatively large container. It was without knowledge of Blair's idea. It used an ordinary Mason jar, packed in a casing with interposed insulation and with a metal tube for filling and emptying, extended from the jar cover up through the open top of the outer container and soldered thereto. There was thus (perhaps) the pendent support, but no combination of metal and glass, by such a bond or support by that bond, as Blair provided, and there was no obvious metallic channel for heat escape. About the same time the Monarch people made a second form, using an earthenware container with a neck and a metallic outer jacket conically drawn in at its neck and closely surrounding the projecting earthenware neck, but there was no attempt at insulation at this point between the two, or support of one by the other, but for this support the interposed packing material was relied upon. As this could not maintain resilience, the structure was certain to be inefficient as well as heat conveying. They planned to manufacture this on a large scale, but very soon discarded it. About July, 1918, they tried a third form, upon which, in December, they filed an application for a patent (later abandoned). This was like the second form just described, except that spring supports were interposed between the two bottoms to hold the inner container up in position (like the trial form experimentally produced by the "icy-hot"). This could hardly be satisfactory; the springs could not hold the inner jar motionless, there was no bond or seal at the necks, moisture and air would enter the packing material and both the direct contact of the two necks and the lower springs would make troublesome heat conveyers. In March, 1919, they

We thus find that in accomplishing this combination of old elements to make a new market article, there had been not only the delay of thirty or more years since the old patents now said sufficiently to teach the combination (though during most of this period there was no foreseen

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filed another patent application on a fourth and slightly different form. It lacked springs, but it had the other recited defects. They had not felt justified in trying to market any of these four forms. A fifth form, adopted October, 1919, was put upon the market. This was like numbers 3 and 4, except that they endeavored to avoid the heat escape at the contact point of the two necks by interposing a rubber gasket. There was no suggestion of bond or pendent support. There was a form of sealing by this gasket, but nothing to compel contact so as to make the seal effective. During 1919 and 1920, they marketed some 7,000 jugs of this type, of which nearly half were returned as unsatisfactory. In the fall of 1920, they substituted for number 6, form number 7. This was an elaboration of the rubber gasket idea. In addition, the inner jar was pendently supported at the neck by a screw thread engagement with the cap which was in contact with the outer container. Here again there was a heat losing contact between the inner and outer parts, and nothing resembling a supporting insulating bond between the two. As a sealing means, the rubber gasket was inefficient because it would be released whenever the cap was taken off. They manufactured and sold this form with some success for two years. Just at what time they had knowledge of the Blair construction does not appear, but in 1923, they abandoned number 7 and adopted the Blair idea of pendent-bond-support. They discarded their rubber gasket seal and separable two-part form of the outer casing; they abandoned direct contact between the two necks, enlarged the outer one so as to get an intermediate space, and filled this in with a composition which was both bond and seal and which caused the inner to be pendently supported by and from the outer.

public demand for a thing of this kind), but there had been, after the demand was known, two or three years of effort by Blair's competitors to satisfy it by using their best skill in various combinations other than his, and we see that eventually one of them dropped out and the other two were compelled to use Blair's system of bond support for the pendent inner container. Seldom is there a record of failure by other things and success by the patented means, more helpful than this is, upon the issue of invention.

We do not overlook the problem presented by the form of the claim. The functions of the bonding material, as an insulator to interrupt the flow of heat and as a seal to exclude air and moisture from the packing, are not specified in the claim, although they are of considerable importance, (we do not say vital), in distinguishing from the prior art.

We think this patent is entitled to a fairly liberal construction in aid of its validity and ought not to be defeated by any unnecessary adherence to technical rules. We think also that the always implied "substantially as described" and the doctrine of interpretation by the specifications, justify regarding the "bond" of the claim as one which does effectively insulate the outer and inner members. The patent specifies, in line 61 of page 1, that the bonding substance shall be of low heat conductivity, and the succeeding lines emphasize that it is to be incapable of transferring much heat or cold from one to the other. Its "non-heat transmitting properties" are again emphasized in line 115 of page 2. To import this limitation into the claim is not to bring in an additional element. It is only to interpret with the aid of the specification one of the words of the claim, so that it may not be thought so broad as to be destructive.

How far the sealing quality should also be implied in the claim in aid of its validity, it does not seem necessary to

decide. Nor need we decide just what would or would not be the supporting bond contemplated by the claim. In defendant's form, the material of the bond is a sulphur composition. It is strongly adherent, both to glass and metal. It seems probable that it would, unaided, sufficiently support the pendent receptacle; but its operation is aided by providing grooves in the outer surface of the inner and the inner surface of the outer necks into which grooves the bonding composition enters, and which grooves therefore aid in preventing any slippage as between the two members. This construction renders it less vital that the bonding material should adhere, efficiently to smooth glass and smooth metal, as shown in the structure of the patent drawings; but the testimony of the experts that there is infringement is not disputed, we have no argument on the subject, and we think, for the purposes of this record, we should find that infringement exists.

The Seventh Circuit Court of Appeals relied upon three old patents as the most pertinent out of the many cited by defendant in that case, and expressed the view that in selecting elements from these three and combining them, as Blair did, there was no invention. Even if this were a case where the lack of invention could be spelled out in this way, the patents do not seem to us sufficient for that result. *Clisbee*, No. 358,732, March 1, 1887 relates to a double wall metallic can for keeping coffee hot. The inner can is pendently supported by an upturned flange on its neck resting against the indrawn collar of the outer can, and the parts are screw-clamped together. There is no suggestion of bond or seal. The loss of heat from the direct contact of the two metal parts is obvious. The other two patents relied upon (*Heath*, No. 211,092, January 7, 1879, and *Fox*, No. 438,149, October 14, 1890) do not relate at all to heat insulation. They consist essentially of packing boxes to prevent the enclosed bottle from being broken

in transportation. They do not have, in an effective sense, any bond or seal. Fox shows a wooden packing case, for transporting a glass carboy. He furnishes support apparently only from below by an interposed packing. It is true that between the neck of the carboy and the surrounding hole in the top of the wooden box, Fox puts in plaster-of-Paris and says that it is "to exclude water or moisture." There was thus the thought of a seal, but the proof is that plaster-of-Paris alone does not effectively exclude air or moisture, and that it would not adhere to the wood and glass so as to support the heavy carboy. It never was intended to give pendent support. Heath, likewise, who has only a bottle cased for shipping, and whose entire stated object was to prevent breakage, has no pendent support and no bond or seal.

The leading decisions on the subject of invention are too familiar for citation. Their application depends on the facts of each case. We are constrained to the other conclusion from that reached by the Seventh Circuit Court of Appeals. It may well be noted that the testimony of two competitors, showing their unsuccessful efforts to get Blair's result by other means, was not in these McComb and Monarch records, and this proof is so important that it alone goes far toward justifying a different result here.

We have considered only claim 1. There are other claims which are broader in some respects and do not incorporate the supporting bond. They thus present questions of validity which we have not discussed. Some other claims are narrower and suggest questions of infringement. We see no object, upon this record, in considering any of these claims.

The decree will be reversed and the case remanded, with instructions to enter the usual decree for plaintiff on claim 1, and without prejudice to any rights of the plaintiff under any other claim.

APPENDIX E

Sec. 4917 Rev. Stat.; 35 U. S. C. A. 65. Whenever, through inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, a patentee has claimed more than that of which he was the original or first inventor or discoverer, his patent shall be valid for all that part which is truly and justly his own, provided the same is a material or substantial part of the thing patented; and any such patentee, his heirs or assigns, whether of the whole or any sectional interest therein, may, on payment of the fee required by law, make disclaimer of such parts of the thing patented as he shall not choose to claim or to hold by virtue of the patent or assignment, stating therein the extent of his interest in such patent. Such disclaimer shall be in writing, attested by one or more witnesses and recorded in the Patent Office; and it shall thereafter be considered as part of the original specification to the extent of the interest possessed by the claimant and by those claiming under him after the record thereof. But no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing it.

Sec. 4922 Rev. Stat.; 35 U. S. C. A. 71. Whenever, through inadvertence, accident, or mistake, and without any wilful default, or intent to defraud or mislead the public, a patentee has, in his specification, claimed to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the original and first inventor or discoverer,

every such patentee, his executors, administrators and assigns, whether of the whole or any sectional interest in the patent, may maintain a suit at law or in equity, for the infringement of any part thereof, which was *bona fide* his own, if it is a material and substantial part of the thing patented, and definitely distinguishable from the parts claimed without right, notwithstanding the specifications may embrace more than that of which the patentee was the first inventor or discoverer. But in every such case in which a judgment or decree shall be rendered for the plaintiff no costs shall be recovered unless the proper disclaimer has been entered at the Patent Office before the commencement of the suit. But no patentee shall be entitled to the benefits of this section if he has unreasonably neglected or delayed to enter a disclaimer.

APPENDIX F.

Other cited art consists of the eighteen additional patents here discussed.

Of the cited patents, those to Burger & Aschenbrenner (Rec. 382), Henn (Rec. 370), Altenberg (Rec. 374), Lyman (Rec. 378), Steel No. 1,002,009 (Rec. 386) and Steel No. 1,067,072 (Rec. 390), Engel (Rec. 410), Simonson & Blair No. 1,497,764 (Rec. 448) and St. Vrain LeSieur (Rec. 402) relate to the art of vacuum-insulated receptacles and obviously are not pertinent as anticipations of devices in the non-vacuum art, their lack of relevancy being indicated by the whole tenor of the testimony given by the witnesses Terry, Brainard and Davis (Rec. 46-48, 60-64, 29-32).

Furthermore, the history of the art clearly shows that knowledge concerning vacuum-insulated receptacles did not aid those who were seeking a stronger and larger substitute for those small and frail devices (Rec. 62).

It has been urged herein that the patent to Steel, No. 1,067,672 (Rec. 390) anticipates the Blair invention and that some of the claims thereof read on Steel.

The Steel patent discloses a large-sized glass container for transporting milk, suspended by screw-threads on the exterior surface of the neck of container engaging screw threads on the inner surface of the neck of the metal jacket. Cement is poured between the screw threads. Between the walls of the container and the jacket is a thin layer of asbestos, or cork, which, however, is spaced from both walls by a partial vacuum.

It is obvious that the container is supported by the screw threads on the neck of the container (not by a separate

intervening element, the bond), that the thin layer of cork (29) does not tend to limit the tendency of the large pendently supported body to oscillate or have pendulous movements when subjected to external shock, and that the neck of the container being in direct heat conducting relationship to the neck of the metallic jacket will tend to break due to the differential of expansion of the glass and metal (if heated liquid is placed in the container). Furthermore no means is provided to limit the amplitude of pendulous movements, and any shocks administered externally would cause the container to fracture at its neck.

The Sturges patent (Rec. 406) shows a milk can having a metallic container and a metallic jacket, between which insulating material is disposed to protect the contents from heat. The container is supported at the bottom and, being made of metal, is inefficient as a heat-insulator. Said patent discloses no means by which a vitreous container might be supported from a metal jacket.

The patent to Davis *et al.* No. 1,333,795 (Rec. 420) covers merely a shock-resisting diaphragm added to the Blair invention (Rec. 199). This patent is irrelevant.

The patent to Simonson and Blair, No. 1,309,967 (Rec. 413), relates to heat-treated lac, and reveals no receptacle of any kind.

The Blair patent in suit is not limited to a lac bond, although a bond of that material may be employed.

The Clark patent No. 46,640 (Rec. 348) shows a milk can having concentric (and undoubtedly metal) shells between which pulverized charcoal is disposed to protect the milk from heat; the Moore patent, 194,256 (Rec. 352) merely discloses a demijohn having a protective casing enclosing a packing and provided with a protected neck that is so constructed as to allow the contents to be conveniently poured, and the Rood and Johnson patent,

1,362,740 (Rec. 426) reveals a heat-insulated receptacle of the non-vacuum type, but the glass container thereof is not pendently supported, its sustaining means being a cushion of corrugated cardboard. These three patents clearly are not in point.

The patent of H. M. Smith, No. 1,431,189 (Rec. 430), is stated to cover an improved form of stopper or closure for a heat-insulated receptacle as well as convenient means for locking the stopper in closed position. It is intended as an improvement on the Stanley patent No. 1,071,817 (Rec. 396). The container and the jacket are both made of metal, the container, being of metal, affording a ready avenue for the escape of heat units. As in other similar devices there is no problem nor means disclosed for uniting a vitreous container to a metallic jacket.

It is apparent that no disclosure in this (Smith) device aided inventors in solving Blair's problem. Furthermore, this is intended as a metallic vacuum insulated bottle wherein an ordinary vacuum (less than heat-insulating vacuum) is maintained.

The Primas-Gesellschaft Ritzhaupt & Company, French patent, 403,574 (Rec. 467) shows an encased bottle which is not pendently supported, and the Lodo, *et al.*, French patent, 411,568 (Rec. 473) shows a protected glass carboy whose body, but not its neck, is heat-insulated, the packing employed being the obvious support for the carboy. These two patents plainly do not anticipate the Blair invention.

Knight's Mechanical Dictionary (Rec. 255), at the place indicated in the answer, speaks of a substance, but not of a heat-insulated or other receptacle. Even if this substance were (as it is not) such as to unite the jacket and the container of Blair, still it would not suggest Blair's combination of elements.